

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004942**Date Inspected:** 14-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Tower**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**OBG Bay 4:**

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technician Xu Hai, utilizing the Magnetic Particle Testing (MT) Method to perform a final MT examination on the cover pass of the fillet welds on Side Plates SP226A Yellow Tag 002343 (SP226-001) Location CB3 WJ's 001 through 006; SP223A Yellow Tag 002344 (SP223-001) Location CB3 WJ's 001 through 006; Bottom Plates BP46A Yellow Tag 002345 (BP046-001) Location 9DW WJ's 007 through 018 and BP154A Yellow Tag 002346 (BP154-001) Location 9DW WJ's 007 through 018. Mr. Xu and the QA Inspector observed a rounded indication at Y=40. A ZPMC helper slightly ground the area of the indication at the direction of ZPMC QC. Mr. Hai performed MT on the area at Y=40 after the grinding. There appeared to be no indications and ZPMC QC accepted all the welds on the above listed panels.

The QA Inspector performed a 100% final Visual Testing (VT) and 10% MT verification on the cover pass of the fillet welds on Side Plates SP226A Yellow Tag 002343/Green Tag 002440 (SP226-001) Location CB3 WJ's 001 through 006; SP223A Yellow Tag 002344/Green Tag 002429 (SP223-001) Location CB3 WJ's 001 through 006; Bottom Plates BP46A Yellow Tag 002345/Green Tag 002441 (BP046-001) Location 9DW WJ's 007 through 018 and BP154A Yellow Tag 002346/Green Tag 002442 (BP154-001) Location 9DW WJ's 007 through 018. There

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appeared to be no indications and the QA Inspector accepted all the welds on the above listed panels.

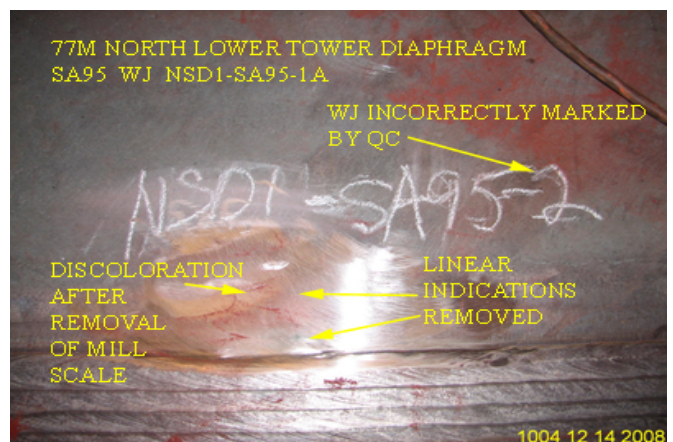
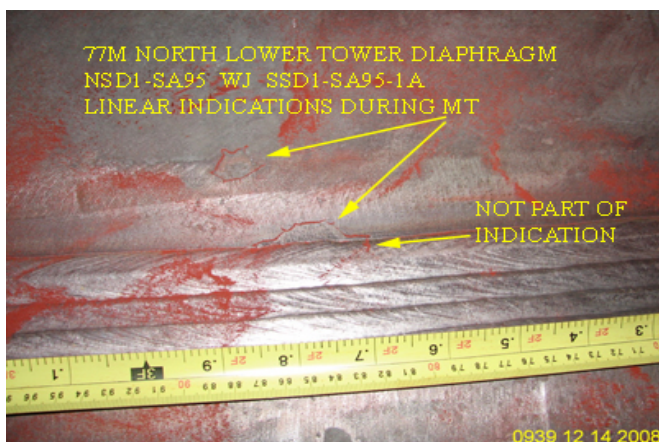
The QA Inspector randomly observed ZPMC NDT Technician Xu Hai, utilizing the MT Method to perform a final MT examination on the cover pass on a butt splice on 53M Upper Tower Diaphragm between piece marks p233 and SA404 at WJ WSD1-SA404-1A. There appeared to be no indications and ZPMC QC accepted WJ WSD1-SA404-1A.

The QA Inspector randomly observed ZPMC NDT Technician Xu Hai, utilizing the MT Method to perform a final MT examination on the cover pass on a butt splice on 77M Lower Tower Diaphragm at WJ's NSD1-SA95-1A and NSD1-SA95-2A. Mr. Xu and the QA Inspector observed 2 separate linear indications in the base metal adjacent to WJ NSD1-SA95-1. A ZPMC helper ground the area which included both indications, to a depth of slightly less than .25mm. Mr. Xu performed MT after the area was ground and the indications appeared to have been removed.

The upper indication appeared to be a small patch of mill scale and the lower indication appeared to be some kind of inclusion line and neither indication appeared to be associated with the welding. There appeared to be no indications after the rework and ZPMC QC accepted WJ NSD1-SA95-1A and NSD1-SA95-2A. The attached photographs provide additional detail.

The QA Inspector performed a 100% final VT and 10% MT verification on the cover pass of the on a butt splice on 53M Upper Tower Diaphragm between piece marks p233 and SA404 at WJ WSD1-SA404-1A. There appeared to be no indications and QA Inspector accepted WJ WSD1-SA404-1A.

The QA Inspector performed a 100% final VT and 10% MT verification on the cover pass of the on a butt splice on 77M Lower Tower Diaphragm at WJ WSD1-SA95-1A and 2A. There appeared to be no indications and QA Inspector accepted WJ WSD1-SA404-1A.

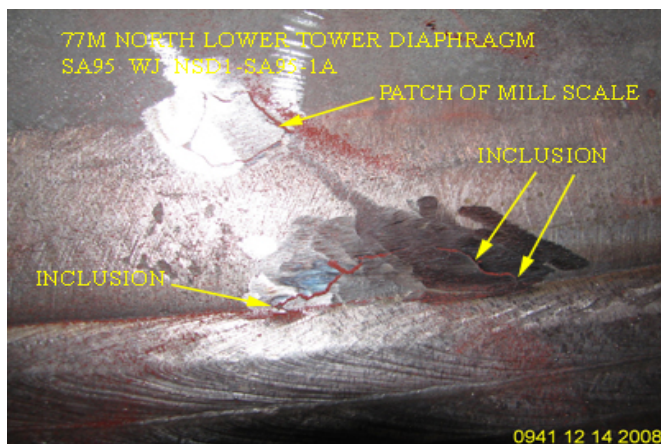


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### Summary of Conversations:

As noted in the above body of this report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dautermann, 15002199593, who represents the Office of Structural Materials for your project.

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**Inspected By:** Franco,Charlie

Quality Assurance Inspector

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**Reviewed By:** Wright,Mark

QA Reviewer